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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,114	10/02/2003	Lo Mao	BHT-3092-387	6035

7590 12/01/2006

BRUCE H. TROXELL  
SUITE 1404  
5205 LEESBURG PIKE  
FALLS CHURCH, VA 22041

EXAMINER
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HORTON, YVONNE MICHELE

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/676,114

Applicant(s)

MAO, LO

Examiner

Yvonne M. Horton

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 13, 14 and 16-21 is/are rejected.
- 7) ☒ Claim(s) 8, 10-12, 15 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3,5,10,11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 3,5,10,11, the phrase "and the like" and "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,3-7,9,13,14 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #6,237,303 to ALLEN et al. In reference to claims 1 and 16, ALLEN et al. discloses a bending moment structure and method for fabricating such including a plurality of supported members (102) having two ends, one of which is joined to a connection element (as at 48); a plurality of supporting members (100) also joined to the connection element (48) at a support spot wherein the supported member (as at 136) moves to endure the bending moment. ALLEN et al. does not explicitly detail that the members contact; however, due to the use of the slot (136) makes some amount of close contact, even if only a minimal amount. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made that the members of ALLEN et al. contact. In reference to claims 3 and 7, the members are H/I-shaped. Regarding claim 4, the members have two or more deflection points (as at each end thereof). In reference to claims 6 and 9 the supporting members (100) are disposed laterally of the supported members (102) such that the supported members are disposed between the supporting members. Regarding claims 13,14,20 and 21, the members contact when there is no action from loading and when a load is exerted thereon. In reference to claims 18 and 19, members are non-prismatic shaped. Regarding claim 15, ALLEN et al. discloses the method of selecting the supporting members (100), determining cross-sections thereof, placing an end at a support spot (48) in a deflection path that is formed due to the supported member (102).

Claims 2,5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #6,237,303 to ALLEN et al. in view of US Patent #6,012,256 to

ASCHHEIM. ALLEN et al. discloses the basic claimed structure except for the member having a hollow cross-section. ASCHHEIM teaches that it is known in the art to form a structure with hollow supported and supporting members (3). Further, the applicant has shown not criticality for a hollow member as opposed to any other shaped member. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a shape suitable for the use intended as an obvious matter of design choice. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the members of ALLEN et al. similar to those formed by ASCHHEIM since hollow and shaped members are art recognized equivalents.

#### ***Allowable Subject Matter***

Claims 8, 10-12, 15 and 22 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

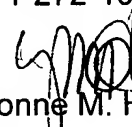
#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (571) 272-6845. The examiner can normally be reached on 6:30 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naoko Slack can be reached on (571) 272-6848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3635

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Yvonne M. Horton  
Examiner  
Art Unit 3635

11/27/06